

## Mining District File Summary Sheet

DISTRICT	Churchill County General - see back
DIST_NO	0020 - see back
COUNTY If different from written on document	Churchill - see back
TITLE If not obvious	Progress Report on Nevada Work
AUTHOR	Mac Kevett, Jr., E.
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QUAD_NAME	Edwards Creek Valley 100K
P_M_C_NAME (mine, claim & company names)	MAPCO
COMMODITY If not obvious	
NOTES	Brief work summary: geology, area sketch map, correspondence  10p.

Keep docs at about 250 pages if no oversized maps attached  
(for every 1 oversized page (>11x17) with text reduce  
the amount of pages by ~25)

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SS:	Initials	Date
DB:	RB	12/03/09
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District	District No.	ID No.	County
✓ Lander Co. General	0090	60002268	Lander
✓ Alpine	0220	60002269	Churchill
✓ Bernice	0560	60002270	Churchill
✓ New Pass	3370	60002271	Lander/Churchill
✓ Tungsten Mountain	4940	60002272	Churchill
✓ Wild Horse	5320	60002273	Churchill



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Progress Report on Nevada Work

By

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June 3, 1981

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## Scope

This report provides a summary of MAPCO-related work in Nevada by Rob Foster and Ed MacKevett intermittently during May, 1981. The main area of our exploration interest is shown on the accompanying map. It includes the Augusta Mountains and their northward continuation, which extends about 8 miles beyond the northern limit of the map, and the northernmost parts of the Clan Alpine Mountains and the New Pass Range.

## Results to date

The significance of our work to date is contingent on analytical results, which should be forthcoming soon.

Our potentially most important findings are:

(1) Recognition of a jasperoid-opalite complex, which we interpret as a hot springs deposit, within a Tertiary volcanic sequence. The deposit crops out over less than a square mile. It is locally underlain by strongly altered tuff, which probably is proximal to its vent, and if this material is mineralized it would increase the deposit's size. We have sampled the deposit extensively and covered its exposures with claims.

(2) Some of the conglomerates within Triassic carbonate sequences are of exploration interest. These are mainly pebble conglomerate with chert clasts, probably derived from upper plate Vinini-type rocks, in altered matrices. Our hope is that the alteration represents a hydrothermal event that was accompanied by metallization, chiefly gold or possibly other elements such as uranium. Due to its extent, the conglomerate has been only cursorily sampled although we have collected several samples from it. The conglomerates are volumetrically large, and if analyses of their samples are encouraging to any degree, they should be subject to large-scale sampling and claim staking.



(3) What we interpret as feeder faults and fractures to one of the known mercury deposits in Tertiary volcanics cuts a stratigraphically subjacent sequence of fractured and bleached shale and its limestone capping. The shale is volumetrically large and appears to be pervasively altered. Parts of it crop out on claimed land. We have taken a few samples aimed at testing both the shale and the limestone.

(4) Our other sampled sites mainly represent altered material along or near north-striking faults. In some cases the samples were collected along the intervening fault segments between known deposits or at invalid prospects.

#### Work methods

Fieldwork was supported by a 4-wheel drive vehicle and focused on reconnoitering large parts of the area-- after preliminary office geologic and land status studies-- in an endeavour to identify favorable sites for mineral deposits, particularly those of the fine-grained disseminated gold type. Such potential sites were sampled to varying degrees and, in two cases, claimed. Preliminary geologic mapping, intended to provide better insight<sup>\*</sup> of potentially favorable sites, accompanied some of the investigations but, because of time limitations, was kept to a minimum. Also, we examined most of the few mines and prospects in the area. One hundred and twenty four samples were collected and submitted to Skyline <sup>Wheat Ridge</sup> (Lakewood, Colorado) or Hunter (Sparks, Nevada) for analyses. Most were grab or chip samples of altered zones and rocks, but some represent soils and sediments. All samples are being analyzed for gold and a few typically associated elements, and several are destined for 31 element semiquantitative spectrographic analyses. Analytical results are pending.



Office and related work consisted of reading the pertinent literature, checking records at BLM and County Recorder offices, and map compilation and preparation. The latter includes compiling a 1:24000 scale geologic map of the target area from the best available sources and preparing sample location maps, which will be augmented by derivative maps that show analytical results when such data are available. Much of the available mapping is sketchy, and we are modifying some the previous mapping during our fieldwork.

### Geologic summary

Two rock sequences dominate the geology of the exploration area: (1) thick Triassic carbonates that contain subordinate clastic facies including intraformational conglomerates, and (2) Tertiary volcanics including rhyolitic tuffs and less abundant mafic and intermediate phases. Tertiary subaerial tuffaceous sedimentary rocks are locally abundant within the volcanic sequences. Upper Paleozoic sedimentary rocks, chiefly carbonates, and Jurassic granitic plutons crop out locally within the area. Occurrences of other rock types, such as Tertiary subvolcanic plutons, are suspected but as yet unconfirmed in some of the poorly mapped parts of the area.

Steep northward-striking faults of the Basin and Range type with mainly dip-slip displacement components are the most conspicuous structural features. In places, these faults are intersected by steep faults that strike more eastward or westward that probably mainly have strike-slip displacement components. Virtually all of the faults are believed to be Cenozoic features.

Known mineral deposits in the exploration region are chiefly for mercury (cinnabar) that is associated with stibnite and barite. One known deposit consists mainly of hydrothermally derived barite and another of manganese minerals. Most known deposits are localized along and near Basin and Range type faults and generally are considered as epithermal and genetically related to Tertiary volcanism. The area contains a few prospects, purportedly for gold, at a remote location that we haven't visited yet.



## Rationale for exploration

The following premises and conclusions that favored the selection of the target area are mainly attributable to Rob, but I concur with them.

(1) The region is thermally active and probably contains a thermal regime and plumbing system similar to many Nevada disseminated gold districts. This is substantiated by active and successful geothermal exploration in parts of the area, by known deposits that are inferentially related to shallow hydrothermal systems, and by the widespread Cenozoic volcanism and faulting. Various rocks and structures regarded as favorable receptive ore hosts are known, but whether vital source rocks, considered by some to be necessary precursors to metallization in disseminated gold deposits, are present at depth is moot.

(2) The exploration area contains numerous Basin and Range type faults. In places these are intersected by more westward-striking faults that may reflect Rob's "Austin trend" and possibly provide favorable loci for ore deposition.

(3) The region has been scantily prospected for disseminated gold deposits despite its geologic favorability. This will probably change soon as many companies have exploration crews operating from Austin-- mainly with helicopter support.

(4) Large tracts of the area are accessible to 4-wheel drive transportation enabling relatively low-cost logistics.

## Work plans and recommendations

At present we have curtailed fieldwork for a few weeks. This should permit evaluation of the analytical results, and hopefully with your input determining the future course of the project. Obviously, if any of the analytical results are encouraging they should be followed up on as soon as possible. Conceivably this could result in large-scale claim staking and sampling and require additional personnel. If the sample results are negative we have at least eliminated several tracts and targets from further consideration.



In any event, Rob and I would like to spend about 10 more days in reconnaissance exploration supported by his 4-wheel drive truck-- similar to what we've done. This would complete what we call phase I and cover most of the area that is amenable to such exploration. Subsequently, phase II in our terminology, would consist of a couple of weeks of helicopter-supported reconnaissance of higher or remoter parts of the target area. For an optimum operation two other geologists or field assistants should also participate in this work. After that we should evaluate results of all previous work and determine what future exploration, if any, is desirable. Much of the higher terrane in the Augusta Mountains is underlain by carbonate rocks and has been scantily prospected. Some other high or remote terranes contain granitic plutons and abundant, mainly felsic, volcanics. I don't believe that these terranes can be assuredly negated without some field investigations. Geologically, parts of the area are favorable for uranium and probably merit exploration.

#### General

Rob and I have maintained a low profile and avoided visiting Austin as much as we could. Currently, Austin is teeming with explorationists and the competition is keen. The less they know about our activities, the better. We had quite a lot of rain and snow during May, and at times I thought that I was in Alaska. We can look forward to some hot weather, which would be a good time to explore the high-altitude terranes.



